VETERANS ENGINEERING RESOURCE CENTER
VA PITTSBURGH HEALTHCARE SYSTEM

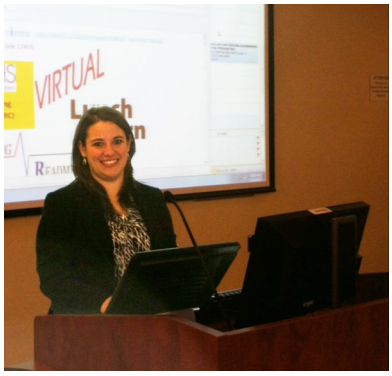
@VERC

The VERC says goodbye to the closing Highland Drive campus with a potluck

ALSO IN THIS ISSUE

REDUCING READMISSIONS PROJECT

The avoidable readmission of patients within thirty days of discharge, for the same or closely related medical or surgical problem, is highly undesirable for both patient care and financial reasons. Readmitted patients utilize a large amount of resource, they contribute to a decrease in access to care, and there is commonly a reduction in the efficiency of inpatient flow. Ultimately, a hospital with excessive readmission rates leads to inefficient outcomes and a decrease in patient satisfaction.



Ashley Ketterer, manager of the Reducing Readmissions project, presenting at the December Lunch and Learn

The Pittsburgh VERC hosted the first of many Lunch and Learn Sessions in early December to spark the interest about the importance of reducing readmissions. This session brought out interest across many disciplines in the VA Medical Center.

Current Pittsburgh VERC efforts to reduce readmissions include working with existing VAPHS teams to develop, refine, pilot and implement strategies to reduce readmissions. Additionally, the VERC is also working with academic affiliations from the University Of Pittsburgh Katz Business School to develop a disease specific predictive model to target patients with an increased probability of being readmitted.

Issue No. 3
Winter 2013

Health Systems Engineering Course

The VERC continues to partner with the University of Pittsburgh School of Industrial Engineering to provide a Health Systems Engineering Certificate program. VERC staff served as guest lecturers for the HSE course and facilitated a "Living Laboratory" at VA Pittsburgh's University Drive campus. This laboratory gave students the unique opportunity to interact with healthcare practitioners and leadership to learn about how to apply industrial engineering skills in a healthcare environment.

Funding Veterans' Education at the Heinz College

Carnegie Mellon University's H. John Heinz III College is dedicated to making our top-ranked graduate degree affordable for U.S. Military veterans. Education benefits offered by Heinz are designed with the goal of making graduate education financially feasible, regardless of the student's VA benefits eligibility.

Heinz College's U.S. Military Veterans Scholarship
U.S. Military Veterans who are not receiving 100% tuition benefits through the US Department of Veterans Affairs are eligible to receive a scholarship of up to 25% of tuition costs (students can be awarded additional support above and beyond this particular award by the admissions committee).

Yellow Ribbon - Eligible Veterans
As a Yellow Ribbon participant, Heinz and the government will provide Veterans with 100% Post 9/11 GI Bill eligibility with financial support equal to 100% of tuition and fees

VA Benefits (Chapter 31 and 33)
Veterans eligible for Chapter 33 benefits will receive funding from the VA at the discretion of the VA. Heinz College will award scholarship to students at the time of admissions.

Eligible veterans first enrolling in the Heinz College in the 2012-2013 academic year on a full time basis had a maximum Post 9/11 GI Bill Benefits of $18,077.50 per year. For more information, please visit: http://hnz.cm/Veterans1P

Involvement in the VA Community

VERC Staff Jessica Ngan (L) and Ashley Ketterer (R) volunteering at the VA Staff Appreciation Day Lunch

External Collaborations

In 2013, the VERC department was invited to tour the VA Human Engineering Resource Laboratories (HERL) department at Bakery Square in Pittsburgh. HERL is a worldwide leader in research and development that increases the mobility and function of people with disabilities, with the ultimate mission to continuously improve these lives through advanced engineering in clinical research and medical rehabilitation. Given their capacity of in-house manufacturing and technologically advanced facilities, the VERC wishes to start a collaboration with HERL to bring our strengths in redesign and prototyping to a finalized tangible end product. We are very much looking forward to this collaboration and the possibilities that will arise from it.

Dr. Rory Cooper of the HERL shows members of the VERC some of the wheelchair technology his group have created (From left to right: Jessica Varone; Joe DeUnger; Matt Jenkins; Dr. Rory Cooper; Stephanie Hare)

Game-Based Learning Projects

The concept of game based learning was first presented to central office in 2011. The idea quickly grew legs and by July 2011, the VAPHS VERC began developing a computer game to teach principles to improve patient access (ACCESS Game).

After the ACCESS Game progressed to training the trainers, the VERC quickly realized that the game had the potential to be used as a "game engine", and that it could be applied as a useful teaching tool for other concepts as well. In 2013, the VERC released the NIRMO Game to teach different strategies of reducing the Missed Opportunity rate.

Currently the VERC is in the final stage of using the "game engine" to generating another new game to teach MSA principles--The Scheduler Master Game. This new game has a tentative release date of March 2014 and will be released as a Clinic Trilogy game with upgraded versions of the ACCESS and NIRMO Game.

If you are interested in any of our game based training tools, please email Lanxi Tang at Lanxi.Tang@va.gov.

.

Academic Partners

The VERC has continued to strengthen our relationships with a number of highly respected academic institutions both locally, and nationwide. In FY 2013, we entered into a formal academic affiliation with the Heinz College at Carnegie Mellon University.

The VERC also has existing affiliations with:

- Pitt Public Health
- Pitt Katz Business School
- Pitt School of Industrial Engineering
- The Entertainment Technology Center

VERC Data Dashboards and Toolkits

The VERC has developed multiple tools for facilities to analyze their missed opportunity (MO) and Advanced Clinic Access (ACA) data:

- Missed Opportunity Toolkit
- MO ACA Data Collection Tools

Operating Room Storage Utilization

In May, the VERC began the OR Storage Utilization Project to reallocate the storage in the operating room more effectively in order to reduce the footprint of the equipment and supply inventory currently located within the OR. Since then, a number of accomplishments have been achieved, including the following:

- The suture room in the core was cleared of supplies
- A number of shelves in the large GIP supply room were consolidated in order to begin storing items from the small glove room into the GIP supply room
- A plan to implement a two cart system has been developed which would dramatically reduce the footprint of glove inventory
- The anesthesia room has made steps to begin having the inventory from the GIP anesthesia room consolidated with its inventory
- A pilot program was launched to begin storing foam pads at the Heinz warehouse, where foam would be stored at Heinz and transported to the OR multiple times per week to reduce the foam storage footprint in the OR

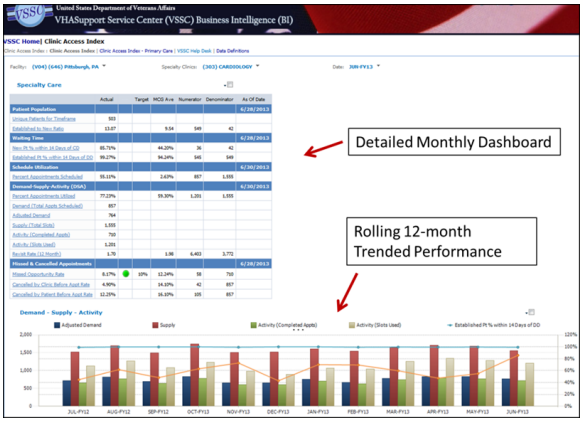
Med Rec Process Improvement

The med rec improvement team was formed in August, 2013 and includes stakeholders from primary care, pharmacy, nursing, case management, quality & safety, and VERC. The team has analyzed the process of providing medications at the time of discharge and ways to improve safety and effectiveness . Targeted problem areas include handoffs, miscommunications, time-dependent events, and human factors/workflow issues. The team is now piloting small tests of change in increased case manager involvement, standardizing certain aspects of work, and possible changes to the format of electronic information and printouts.

The Med Rec Process Improvement team (From Left to Right): Larry Gerber, Nick Celender, Hammond Adjei, Dr. Gaetan Sgro, David Strohm, Tom Bassett.

Clinic Access Index (CAI)

Matt Jenkins, Pittsburgh VERC Industrial Engineer, is part of a national team assembled of Veteran Health Administration (VHA) clinical and administrative access subject matter experts to develop a user friendly access data tool. The aim of this team is to develop an access analysis tool that will allow clinicians to easily measure and understand their clinic access to help improve patient access. The team was assembled as a result of a recommendation by the Government Accountability Office (GAO) to improve access across the VHA .



An example CAI dashboard

The developed tool is a web based graphical user interface that retrieves data from VSSC cubes. The tool is designed to help clinical and administrative staff analyze access on a National, VISN, Administrative Parent, and Division level. The tool allows the user to analyze Primary and Specialty Care stop codes down to the clinic level. The main role of the VERC is to help define and validate the metrics. The tool will be release nationally in early FY14.

Brief Alcohol Intervention

The Brief Alcohol Intervention project is a collaboration between the VAPHS VERC & the VAPHS CHERP to create a provider-facing, computer-based tool to guide a provider through the process of conducting a brief alcohol intervention (BI) with patients who screened positive for alcohol misuse. Rates of drinking, binge drinking, and driving under the influence of alcohol are higher among Veterans than non-Veterans with approximately 20% to 30% of all Veterans screening positive for alcohol misuse. To reach the long-term goal of reducing overall patient alcohol consumption, binge drinking episodes, and alcohol-related problems, the VERC is has developed and is piloting a computerized clinical decision support system (CCDSS) to assist primary care clinicians with the real-time delivery and documentation of alcohol BI. This tool will increase the frequency of screening, and improve the quality of brief alcohol interventions in the VA Primary Care PACT teams.

Pharmacy Innovations Class

For the second year in a row, VERC served as faculty for the "Successfully Implementing Healthcare Innovations" course in the University of Pittsburgh School of Pharmacy. The didactic and experiential learning provided by the VERC gave participants the opportunity to develop detailed and effective strategic frameworks to assist in implementing healthcare innovation.

New Personnel at the Pittsburgh VERC

Ms. Jamie Estock, M.A. is a new VERC staff member currently working to establish a human factors evaluation program at the VA to ensure that the safest medical products are used in the delivery of care to our Veterans. She is a Human Factors Scientist with 11 years of experience conducting research to improve the design of products and processes in safety-critical domains. Her primary areas of expertise are in human performance measurement, simulation, and applied experimental design. Ms. Estock completed the patient safety fellowship at the VA Pittsburgh Healthcare System (VAPHS), and has also worked at Aptima, Booz Allen Hamilton, and the National Transportation Safety Board. Ms. Estock is a patented inventor, a successful proposal writer, and an award-winning manager of multi-disciplinary research teams. Ms. Estock holds a B.S. in Psychology from the University of Pittsburgh at Johnstown and a M.A. in Psychology from George Mason University.

Rachel Szewczyk is the most recent post-graduate VERC fellow. She recently graduated from the Heinz College at Carnegie Mellon with a masters degree in Healthcare Policy and Management. Prior to her time at Heinz, she received her Bachelors in Mathematics from CMU in 2007; from 2007 to 2011, she worked for a firm in Washington, D.C. in a project management role on Consumer Assessment of Healthcare Providers and Systems (CAHPS®) surveys. Rachel's technical interests include data collection and analysis (survey creation, data cleaning, etc.). Her healthcare -related interests mostly focus around improving access to and coordination of care for patients who may have information access issues or complex healthcare needs; in particular, she is interested in the "translation" of healthcare information in order for it to be both useful and understandable for all patients and providers. In her free time, Rachel likes to knit and work on her photography.

Stephanie Hare is from Richmond, Virginia and currently pursuing her Bachelor's Degree from Carnegie Mellon University in Biological Sciences. She hopes to continue her education at this institution for her Master's degree in Healthcare Policy and Management. At the VERC, Stephanie hopes to gain more knowledge into the healthcare world, especially with tools to make healthcare for the Veterans a more efficient system. In her free time, she loves to watch football, ski and play soccer.

IN THE SPOTLIGHT

The Pittsburgh VERC recently said goodbye and good luck to **Elizabeth May**, who began as a Pittsburgh VERC Fellow in November 2010. After her two-year fellowship, she was hired into the VA as a Program Analyst. During Elizabeth's time with the Pittsburgh VERC, she implemented the Missed Opportunities Toolkit and created multiple data tools in Excel. She managed the SharePoint site and implemented several processes to manage it.

Elizabeth recently transferred to the New England VERC in Boston to continue working as a Program Analyst. For any questions or to contact Elizabeth, she can be reached at Elizabeth.May@va.gov.

Sean Morrison was a Vocational Rehabilitation Intern with the VAPHS VERC & Office of Systems Redesign from April 2013 until his departure in November 2013. Sean is currently employed by the VAPHS as a credentialer in the Office of the Chief of Staff. Sean is a graduate of Point Park University in Pittsburgh Pennsylvania with a B.S. Degree in Human Resource Management. Sean is also an 18 Veteran of the U.S. Army, having served in many leadership positions. During his time at the VERC / OSR, Sean was involved in many projects and assigned various administrative duties.

Veterans Engineering Resource Center
VA Pittsburgh Healthcare System

Veterans Engineering Resource Center

1010 Delafield Road
001 VERC-A BA014
Pittsburgh, PA 15215

Phone: 412-822-3815; Fax: 412-822-3824

SharePoint Site (For VA employees)

Robert Monte, *Director*

Tina Howell, *Business Manager*

VAPHS
VA Pittsburgh Healthcare System

FELLOWS WANTED

VAPHS VERC is actively seeking qualified fellows in Healthcare Systems Engineering to participate in an instructive applied training program to improve the quality, safety, and efficiency of healthcare. Fellowships are supported by the Department of Veterans Affairs, Office of Academic Affiliations.

Fellowship applicants must have a Master's degree or PhD. in Engineering, Healthcare, Data Analytics, or related field.

For more information, please contact:

Scott Moore, *Fellowship coordinator*

Phone: 412-822-3807